

Remarks

Corrected Claim Amendment Section

This Corrected Response is in reply to the Office Action mailed October 29, 2003, which included a Notice of Non-Compliant Amendment. The Notice indicated that a complete listing of all the claims was not present, and provided for a one month period to reply. This Corrected Response includes a corrected claim amendment section with claims 1-47, which includes claims previously withdrawn in response to a restriction requirement and not included in Response D, and is filed within the one month period for reply. Applicant respectfully submits that the corrected claim amendment section complies with 37 CF 1.121.

Below is the Remarks and Conclusion submitted with the originally filed Response D.

Remarks from Response D

The above Amendments and these Remarks are in reply to the Office Action mailed October 29, 2003. No fee is due for the addition of any new claims.

ACKNOWLEDGEMENT OF REQUEST FOR CONTINUED EXAMINATION

Examiner acknowledged the Applicants timely filing of a request for continued examination (RCE) along with the appropriate fee in the present application. Applicant thanks the Examiner for the acknowledgment, but wishes to clarify the details of the RCE filing in the present application.

Applicant submits that the RCE, appropriate fees, and a return post card were originally timely filed on September 18, 2002. Though Applicant received the return postcard within a reasonable time after filing the RCE, the USPTO did not provide a filing receipt nor could the

USPTO subsequently account for the RCE filed on September 18, 2002. After much correspondence and communication between Applicant's agent, the USPTO staff, and the Examiner, a copy of the RCE and accompanying paperwork, including a copy of the check for the appropriate fee and the return postcard, were faxed to the Examiner at the USPTO on May 14, 2003.

SUMMARY OF THE APPLICATION

Claims 15, 18-20, 30-33, 36-38, 43 and 45-47 were pending in the Application prior to the outstanding Office Action. In the Office Action, the Examiner rejected claims 5, 18-20, 30-33, 36-38, 43, 45-47. The present Response cancels claim 45 and amends claims 15, 19, 30, 32, 36, 43, and 47, leaving for the Examiner's present consideration claims 15, 18-20, 30-33, 36-38, 43 and 46-47. Reconsideration of the rejections is requested.

RESPONSE TO REJECTION UNDER 35 USC §102 (a)

The Examiner rejected claims 15, 18-20, 30-32, 36-38, 43, and 45-47 under 35 USC §102(a) as being anticipated by United States Patent No. 5,778,092 ("MacLeod"). The Examiner states that MacLeod discloses selecting pixels of an image from plural planes of data based on a selector plane that identifies the ultimate pixel value between the corresponding pixels in the foreground plane and the background plane. Applicant has amended independent claims 15, 30, 36 and 43 to further clarify the invention, and submits that the claimed invention overcomes the rejection under MacLeod.

MacLeod et al. discloses a "technique for compressing scanned representations of color or gray scale documents." (Col. 3, lines 48-49). In particular, MacLeod et al. discloses "the

pixel map representing a color or gray-scale document is decomposed into a three plane page format . . . comprised of a 'foreground' plane, a 'background' plane, and a 'selector' plane." (Col. 4, lines 11-15). The foreground and background plane each contain image information, "stored at the same bit depth and number of colors as the original raw pixel map." (Col. 4, lines 16-17). The selector plane, in contrast, is stored as a bitmap, a binary pixel map in which pixels can take one of two values, 1 or 0. (Col. 4, lines 18-19 and lines 8-10).

Thus, in MacLeod et al., the selector plane is used to choose between a pixel in the foreground plane or a pixel in the background plane. The choice between a foreground pixel and a background pixels is exclusive. The selector plane is used to decompress an entire image by choosing a foreground pixel or a background pixel, but not both. This embodiment of MacLeod et al. does not disclose performing any sort of arithmetic operation of pixels from more than one plane.

An alternate embodiment of MacLeod et al. performs a weighted average between corresponding pixels of the foreground and background plane in order to produce the output image. This weighted average is computed for every pixel of the output image. As stated by MacLeod et al. in Step 2511 of Figure 25b, "for each output pixel compute output pixel as weighted average of foreground and background pixel value." Since every pixel of the output image is a weighted average of foreground and background pixels, every output pixel in the decompressed image is an arithmetic combination of the foreground and background pixels. Because every pixel in this embodiment is an arithmetic combination of the foreground and background pixels, there is no selection between pixels of a single plane and an arithmetic operation of pixels from more than one of said plural planes.

Unlike MacLeod, the present invention as claimed teaches using a selector plane to reconstruct an image by selecting pixels from an upper plane and an additive plane. The additive plane is generated by combining the upper plane and a lower plane of image data. Once generated, the additive plane is used with the selector plane to reconstruct the image.

Claims 15, 30, 36 and 43 recite the element of combining the upper plane and a lower plane into an additive plane and using the additive plane with the upper plane and a selector plane to reconstruct an image, and thereby distinguish the claimed invention from MacLeod. Claims 18-20, 31-32, 37-38, and 46-47 all directly or indirectly depend from independent claims 15, 30, 36 and 43, respectively. Therefore, Applicants respectfully submit that claims 15, 18-20, 30-32, 36-38, 43, and 46-47 are patentable over MacLeod and Applicants have overcome the rejection based on MacLeod.

RESPONSE TO REJECTIONS UNDER 35 USC §103 (a)

The Examiner rejected claim 33 as being unpatentable over Macleod in view of WO 94/06111 (O'Mahony). Examiner states that as to claim 33, O'Mahony discloses the use of an alpha mask/plane which is a super resolution selector plane in corresponding locations of the images, and that it would be obvious to one having ordinary skill in the art at the time of the invention to use the method disclosed in O'Mahony in the method of MacLeod.

O'Mahony discloses a CRT control system that controls the degree of mixing index color signals with corresponding video color-intensity signals for the pixels in a CRT (page 5, first paragraph). O'Mahony does not teach or suggest "wherein said value of said selector plane is based on at least one of super-resolution and fine edge detail in corresponding locations of said

image” as claimed in claim 33, or anything regarding compression of digital images. Further, Macleod et al. does not disclose the elements as claimed in claim 33. For this reason, Applicant submits that the invention as claimed in claim 33 is distinguishable from the cited prior art.

Applicant further submits that claim 33 is allowable as being indirectly dependent upon allowable claim 30.

Furthermore, there is nothing in *O’Mahony* or *MacLeod et al.* to teach or suggest, either implicitly or explicitly, the combination of the references. Applicants respectfully disagree with the Examiner’s assertion that the teachings of O’Mahony, which pertain to a “color CRT display apparatus wherein digital color signals are converted to analog format for controlling the electron beam guns of the CRT,” are analogous to each other. O’Mahony relates to controlling a CRT screen, while MacLeod relates to compressing and decompressing images, two different and distinct fields. Therefore, Applicants respectfully submit that the claims are now in position to overcome this rejection and requests the rejection be withdrawn.

The references cited by the Examiner but not relied upon have been reviewed, but are not believed to render the claims unpatentable, either singly or in combination.

Conclusion

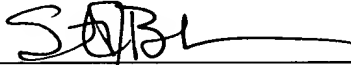
In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and a Notice of Allowance is requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 24-0037 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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By: _____


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